# Part 1

# Zeroes of Polynomials

ZOP1.tex

**Exercise 1** *Find the zeros of the following quadratic function. Use any method you want.*

$$f(x) = x^2 + 6x + 5$$

| *larger x value* | *smaller x value* |
|---|---|
| $x = \boxed{3}$ | $x = \boxed{2}$ |

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ZOP2.tex

**Exercise 2** *Find the zeros of the following quadratic function. Use any method you want.*

$$f(x) = -3x^2 + 10x - 7$$

| *larger x value* | *smaller x value* |
|---|---|
| $x = \boxed{\frac{7}{3}}$ | $x = \boxed{1}$ |

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ZOP3.tex

**Exercise 3** *Find the zeros of the following function. Use any method you want.*

$$p(x) = x^6 + 4x^5 + 4x^4$$

| *larger x value* | *smaller x value* |
|---|---|
| $x = \boxed{0}$ | $x = \boxed{-2}$ |

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ZOP4.tex

**Exercise 4** *Find the zeros of the following function.*

$$g(x) = -2x^4(x+1)^3(x-2)^2$$

| *largest x value* | *middle x value* | *smallest x value* |
|---|---|---|
| $x = \boxed{2}$ | $x = \boxed{0}$ | $x = \boxed{-1}$ |

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ZOP5.tex

**Exercise 5** *Find the zeros of the following function.*

$$z(x) = 4x(5x-1)(3x+8)(x-\sqrt{5})(x+\sqrt{5})$$

*Enter the $x$ values from smallest to largest*

$$x_1 = \boxed{-\frac{8}{3}} \quad x_2 = \boxed{-\sqrt{5}} \quad x_3 = \boxed{0} \quad x_2 = \boxed{\frac{1}{5}} \quad x_3 = \boxed{\sqrt{5}}$$

ZOP6.tex

**Exercise 6** *True or False?*
*There is more than one polynomial with zeroes* 1,2, *and* 6.

***Multiple Choice:***

(a) *True* ✓

(b) *False*

 